whether intestinal stasis is not the primary trouble to which the gastric disorder is secondary. In this interpretation the headaches would be explained as autotoxic and the stomach condition as reflex. The objection to this theory is that laxatives alone do not remove the symptoms, but that a proper diet seems the essential feature in treatment, the determination of what is proper depending on investigation of the gastric functions. This arrangement of dietary with other measures to overcome gastric atony and faulty secretion are often sufficient to regulate the bowels without the addition of laxatives to the therapy.

The cases outlined have been selected simply because typical of the different kinds of gastric disorder that may be responsible for chronic headaches. Such cases are numerous in the practice of every physician, but unfortunately they are not always recognized, and therefore are not appropriately treated. Other ailments of more serious character usually interest the physician more, but the writer's experience has been that no class of sufferer, from any sort of disease, is more grateful than the victim of chronic headaches recurring throughout months or years, who finds himself at last freed from this annoying and incapacitating disturbance of health.

THE USE OF DAHLIA IN INFECTIONS.[1]

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For a long time anilin dyes have been known to exert certain antiseptic actions, and this has been the subject of a considerable amount of study, and certain practical applications have been made as the result. As early as 1886 Pfeffer showed the effects of certain anilin dyes upon the cells of the higher plants, and in the following year Rozsahegyi pointed out the harmful action upon certain bacteria. He also observed the selective action of the dyes. For example, the bacillus of rabbit septicemia grows readily in the presence of carmin and vesuvin, while it will not grow in the presence of gentian violet. The bacillus of chicken cholera does not grow in the presence of vesuvin but will grow in the presence of gentian violet. These observations did not attract much attention, but a few years later, in 1890, a number of communications were made dealing with this subject. Stilling showed that the dye not only exerts an antiseptic action but also actually kills certain bacteria, and at his request the firm of Merck & Company put out a mixture of methyl violet 6B, dahlia, and benzoyl violet. This was called blue pyoctanin. Stilling mentions the fact that Kramenski suggested the use of pure anilin and of anilin dyes as inhalations in the treatment of tuberculosis of the lungs, and it seems that the curative action of anilin upon wounds has been known to workers in the dye factories, where it is the custom to treat skin wounds by dusting them with various dyes. The selective action of these dyes led to their use in culture media, and Drigalski and Conradi used crystal violet in a dilution of 1 to 100,000 in a culture medium designed for the isolation of the typhoid bacillus. They believed that it hindered the growth of various cocci without interfering with the growth of the typhoid bacillus. Churchman[2] recently published the details of a study of the effect of gentian violet upon various bacteria and found that the various forms of organisms could be separated into violet positive or those in which the growth is inhibited and violet negative in which the growth is not inhibited. For almost all bacteria this relation of the growth to gentian violet is quite constant. Simon and Wood[3] have made a study and have established the fact that an acid dye irrespective of its color in the standard concentration of from 1 to 100,000 is devoid of bactericidal properties while a basic dye likewise irrespective of its color possesses inhibitory power. Among the basic dyes may be mentioned basic fuchsin, methyl violet, crystal violet, Hoffman's violet, and dahlia. Among the acid dyes the acid fuchsin, roth violet, and acid violet. Simon states that this inhibitory effect upon the growth of bacteria is not referable to the color but to their chemical structure (Triamino triphenyl methanes). A second contribution by Simon and Wood[4] contains an account of numerous experiments with various dyes in which they show that the inhibitory action upon the growth of certain bacteria which has been demonstrated to be common to all the triaminotriphenyl methanes is not an exclusive property of this group of anilin dyes but is manifested also to a greater or less extent by other strongly basic dyes. A theory is given concerning this which need not be discussed at this time. They have also demonstrated that certain bacteria belonging to groups ordinarily susceptible to dyes may grow in their presence and many organisms may overcome the susceptibility by adaptation. This has also been announced from Ehrlich's laboratory. Similar studies have been made by May[5] and by May and Heidingfeld.[6] They found that in studying the fuchsins, essentially the same thing that is the most basic, rosalin acetate, is also most toxic for bacteria while the acid fuchsins are not toxic at all. They found that a 1 to 1000 solution of basic fuchsin would kill in five minutes typhoid, paratyphoid, tubercle bacillus, staphylococci, and the oidium albicans. They also found that the 1 per cent. solution did not produce any irritation of the mucous membranes and could even be injected into the bladder. They also found that 1 per cent. ointments which could be used in the treatment of ulcers and abrasions were non-irritating. Stronger ointments would occasionally produce some irritation. They suggest that the base of the ointment be made of five parts of petroleum and five parts lanolin.

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[1] Read at the 26th Annual Meeting of the American Pediatric Society, Stockbridge, Mass., May 28, 1914.

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[2] Jour. Exper. Med., xvi, 221 and 822; ibid., 1913, xvii, 373.

[3] Amer. Jour. Med. Sci., February, 1914, 247.

[4] Ibid., April, 1914, 524.

[5] Jour. Amer. Med. Assoc., April 20, 1912, 1174.

[6] Ibid., May 31, 1913, 1680.

About two years ago in searching for an efficient local application for streptococcic infections of the throat, Dr. Charles Simon suggested the use of dahlia. I started this as a local application, beginning at first with weak solutions, and I soon found that the saturated, that is about 4 per cent., solution could be applied to the mucous membranes of the throat or in fact other parts of the body without producing either pain or subsequent irritation. The drug seems to penetrate only to short distances and for the deeper seated affections has no value, but for superficial involvement of the mucous membranes whether the infection is due to streptococcus or to other organisms the effect is quite striking. In some cases but little effect is noted, it is true, but in others there is marked lessening of the intensity of the inflammation and coincidently a marked lessening of the constitutional symptoms. It has the advantage over other applications in that it is not painful, does not produce irritation, and is markedly antiseptic. The only disadvantage is the color, which, of course, will stain fabrics with which it comes in contact, although most of these stains can be removed if the garment is immediately washed out in cold water. For ulcerations about the mouth it may be used either by applying a saturated solution or a mouth wash varying in strength from 1 to 1000 or 1 to 10,000 may be used. The stronger solutions need not be used very frequently. The dahlia not only kills the offending organism but it has a marked stimulating effect upon the healing. Externally upon skin surfaces the drug may be used with marked benefit particularly upon ulcerations. I have used it with remarkable benefit upon vaccinations which were slow in healing, and upon other abraded surfaces, especially those which are infected. I have not had an opportunity of using it in erysipelas, but Dr. Louis P. Hamburger, of Baltimore, and Dr. T. B. Johnson, of Frederick, have used it in a number of cases, with the most satisfactory results. Dr. Johnson informs me that he has used it with remarkable success in both acute and chronic eczema, in herpes, tinea tonsurans, and furunculosis. In one resistant case of tinea sycosis in which the whole surface of the beard was tremendously involved, the patient was cured after five or six daily applications. It may be used with reasonable hope of success in skin lesions caused by or accompanied with pus organisms.